



# Monterey Bay National Marine Sanctuary Sanctuary Office Report



Volume 10, Number 4

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: AUGUST 16 – OCTOBER 10, 2013

## ABOUT THE SANCTUARY

Designated in 1992, Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, MBNMS encompasses a shoreline of 276 miles and 6,094 square statute miles of ocean.

Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment. MBNMS was established for the purpose of resource protection, research, education and public use of this national treasure.

## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS

### Draft Guidance for Revised Condition Report Process

Draft guidance is nearly ready for review on the revised process for preparing condition reports. The Science Team is expanding the framework of the reports to incorporate both drivers of the human pressures on sanctuaries, and the benefits derived from ecosystem services. Drivers will be discussed, along with the societal values influencing them, as they relate to the pressures in the early parts of the condition reports. The status and trends in selected ecosystem services will be rated in a separate section after what is currently the State section of the reports. As soon as the draft is completed, we will set up a call inviting comments and recommendations from any interested Sanctuary staff.

### ONMS Prepares for the Third International MPA Congress

ONMS continues to prepare for the Third International MPA Congress (IMPAC3; <http://www.impact3.org/en/>). ONMS and partners from the MPA Agency Partnership have committed to organizing a film seminar during IMPAC3; a conference call with the three film-makers from the first session (organized by ONMS) was held on Tuesday, 4 September. A brochure for the

film seminar has been prepared and will be posted to the IMPAC3 website in mid-September. A preparation discussion with Dan was held on Tuesday 4 September to outline the full scope of ONMS commitments and how they will be fulfilled; more preparation sessions are scheduled for 3 and 9 October. A workshop for DC area partners is scheduled for 18 September and may be followed by a webinar for more dispersed partners in early November. ONMS also met with Pew Environment Group on 5 September to discuss ideas for potential WPC sessions.

### Nancy Foster Scholar Orientation 2013

Steve Gittings, Mitchell Tartt, Kate Thompson, Seaberry Nachbar, Claire Fackler, Jenny Stock, and Julie Bursek teamed up with others from the west coast on the Nancy Foster Scholar orientation, held outside Santa Cruz. One day was spent with new scholars, orienting them to NOAA, NOS, ONMS, and business matters related to the scholarship. The remainder of the scholars then joined us for four days of meetings and activities. Twelve of the 14 scholars attended all or part of the meeting. Two had field commitments. Sessions were held on spending, taxes, and other grant management issues, ongoing science and education in sanctuaries, opportunities for program collaborations, communication training, and resume and grant writing. Students were also challenged to introduce their research and look for collaborators during a mock cocktail party, interviewed for six job positions with visiting professionals from regional institutions, practiced radio interviews, and did team-building exercises at a ropes course. They also visited the Sanctuary Discovery Center in Santa Cruz and toured the center with Lisa Uttal. Job interviews were conducted by Lisa Wooninck, Steve Lonhart, Jenny Stock, George Matsumoto (MBARI), Aimee David (Monterey Bay Aquarium), and Sue Sogard (NMFS SWFSC). Bill Douros and Dawn Hayes introduced the students to the west coast region and MBNMS, and Dan Basta attended remotely to provide comments and answer questions. Elizabeth Grzymala-Busse also attended remotely to provide legal advice to the scholars.

### MPA Center Coordinates ONMS Call on Biosphere Reserve Program Review

The MPA Center held a call with staff from Grays Reef, Cordell Bank, Gulf of the Farallones and Channel Islands to discuss the State Department's request for a review of protected areas within the World Network of Biosphere Reserves, designated by UNESCO. The network facilitates cooperation for managing resources to foster a healthy environment and sustainable communities. UNESCO is currently conducting a review (held every 10 years) to assess the program's progress. The four Sanctuaries have been contacted, along with other protected areas, to provide information for the review by October 31, 2013. The sites are moving forward in compiling this information from existing materials. Efforts will be made to coordinate with other protected areas sharing the same Biosphere Reserve. The ONMS group will have a follow up call in early October to assess progress in completing the review.

## National Marine Sanctuary News

### Monitor NMS

Shannon Ricles and Lauren Heesemann hosted the second annual MNMS Youth Working Group retreat. In order to kick-off a new year with the group, the students traveled to the Outer Banks for three days. They conducted a beach shipwreck survey and produced a site plan, explored the marsh environment via soil samples, seining, plankton tows, and water quality testing, climbed the Cape Hatteras Lighthouse, and explored the Graveyard of the Atlantic Museum. The highlight of their retreat was the transit aboard the SRVx from Ocracoke, NC to Norfolk, VA. While aboard the vessel, the students learned how the captain navigates the vessel and the equipment he uses to do so, they also toured the vessel and discussed the equipment onboard and the type of research the SRVx supports. The students also talked with Tane Casserley, Maritime Archaeologist for TBNMS, about his role in BOTAs; Tane explained the equipment that allows maritime archaeologists to survey underwater shipwrecks and showed the students sonar images and photographs that maritime archaeologists collected during BOTAs.

### Florida Keys NMS

Viewers will be educated and entertained by the latest episode of the long-running, FKNMS co-produced documentary television series “Waterways” which addresses the threat of sea level rise and its potential impacts to the habitats and wildlife of south Florida and the Florida Keys. In the episode “[Climate Change and Sea Level Rise in South Florida](#),” resource managers, researchers and educators discuss the impacts of what an estimated global sea level rise between 8 and 80 inches by the end of the century will have on the people and the landscape of south Florida. The “Waterways” series is a joint project between Florida Keys National Marine Sanctuary, Everglades National Park and the U.S. Environmental Protection Agency, informing viewers of the diverse wonders of the Florida ecosystem, and the research and conservation programs that protect them. “Waterways” airs on public and government channels throughout the state of Florida — check local listings for scheduling. Episodes can be viewed on the WaterwaysTVshow YouTube channel <http://www.youtube.com/WaterwaysTVShow>.

### Papahānaumokuākea Marine National Monument

On August 26, PMNM staff got acquainted with some of the aspects through which Native Hawaiians understand natural/cultural resources by paddling wa‘a (Hawaiian canoes). Taking place in Maunaloa Bay just across from the Hawai‘i Kai offices, the lessons included experiencing the ocean in a manner similar to the Polynesian voyagers who continue to ply the waters of the Northwestern Hawaiian Islands, discussing traditional Hawaiian aquaculture practices, and exploring the ways in which mo‘olelo (stories/histories) identify cultural resources and their function within Hawaiian culture. Staff experienced several mo‘olelo by visiting the land and seascapes whence these mo‘olelo are based, a few of which closely parallel mo‘olelo and places in the Monument. The location of this activity also allowed staff, many of whom work almost exclusively in an office setting, to better know the ocean environment that they work to protect. Finally, as the wa‘a we used required multiple paddlers, team-building skills were emphasized as staff hauled the wa‘a in and out of the water and paddled them across the bay. Even in exercises as simple as purposefully paddling out of rhythm—which slowed progress and placed greater strain on the paddlers—staff reaffirmed their shared belief in coordinated action and cooperation.

### Gulf of the Farallones NMS

Gulf of the Farallones National Marine Sanctuary and the Farallones Marine Sanctuary Association, in collaboration with project partners Point Blue Conservation Science, EcoAdapt, National Park Service and the California Landscape Conservation Cooperative applied for a Climate Ready grant through the California State Coastal Conservancy to support the North-central California Coast and Ocean Climate Smart Adaptation Project. The 2-year project will produce a list of focal resources (including habitats, species, and ecosystem services) and vulnerability assessments for those resources, climate change scenarios, a prioritized list of adaptation actions, an Adaptation Implementation Plan, and project design for 2-4 pilot Green Resilient Shorelines adaptation projects. The project will seek community input and solicit expert consultation through a working group of the Sanctuary Advisory Council to recommend adaptation actions. Two expert workshops, one specific to focal resources and one to the vulnerability assessments, are targeted to be held winter 2013 and spring 2014 respectively. This project is a first of its kind collaborative effort to better understand the impacts of climate change to habitats, species, and ecosystem services within the North-central California coast and ocean, address those impacts along with other threats, and promote nature-based solutions through adaptive management and pilot Green Resilient Shoreline projects.

### Gray’s Reef NMS

The Gray’s Reef dive team, along with two divers from UGA’s Skidaway Institute of Oceanography, a Team Ocean volunteer diver and a Nancy Foster scholar, reports successful dive operations. As part of our ongoing acoustic fish tagging project, underwater surgeries were carefully conducted to tag eight new black sea bass, data from acoustic receivers were downloaded, and acoustic arrays, which detect an acoustic pulse originating from tagged fishes, were serviced. Of the many fascinating visitors spotted at the reef during the dives, were nurse sharks, lion fish and a new baby sea turtle. While the sharks and sea turtle were left to their usual business, the lion fish were speared and will be sent to the lab for genetic analysis.



## MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



### MANAGEMENT

#### **NOAA Helps Central California Emergency Hyperbaric Chamber Get Back On-Line**

Emergency multi-lock hyperbaric chambers are "few and far between" in central California, providing a limited choice of treatment options for divers with acute hyperbaric injuries. When the Pacific Grove hyperbaric chamber closed in 2012 due to funding, insurance, and repair issues, MBNMS hosted a meeting of interested parties and collaborated with the NOAA Dive Center (NDC), NOS, the Monterey Bay Sanctuary Foundation, MBNMS advisory council members, research partners, and the City of Pacific Grove to help chamber volunteers reopen the facility. MBNMS and ONMS secured NOS travel funding for two NDC technicians to assist chamber operators in completing repairs and maintenance on the chamber that were vital to its return to service in early August 2013. This NOAA team effort helped preserve an emergency hyperbaric facility essential to safe diving in central California, thus meeting NOAA safety goals and providing tangible benefits to public health and safety in the region.

#### **Santa Cruz County Visitor Council**

MBNMS staff are consulting with the SCCVC on a project they would like to implement as a means to obtain aerial overflight footage of the shoreline of Santa Cruz for marketing purposes. Staff have been giving them guidance on where overflights are permitted without need for a permit.

#### **Congressional Activity**

MBNMS staff met with Congresswoman Lofgren's staff (in follow-up to CHOW) to discuss issues related to ocean health and national marine sanctuaries. Topics included: the amazing power of volunteers; water quality; ocean education; outreach to business; Sanctuary Exploration Center; Essential Fish Habitat (EFH) consultation with multi-stakeholder groups; and the SeaPhoto app. This was a very positive and beneficial meeting, with mutual brainstorming ideas for further promoting the special value of the MBNMS.

#### **Monterey County Convention and Visitors Bureau's Community Relations Committee**

MBNMS staff have been appointed to the Monterey County Convention and Visitors Bureau's Community Relations Committee. This Committee is an ad hoc working group. The purpose is to ensure good relations, active participation and cohesive communication with partner jurisdictions, business associations, and community groups on the positive economic and social impacts of tourism in Monterey County. The first meeting was held this week, and is comprised of area community leaders.

#### **MBNMS Staff Discusses Santa Cruz Wharf Master Plan**

MBNMS Superintendent and Exploration Center staff met with City of Santa Cruz Redevelopment Agency and consultants working on a master plan for restoring and enhancing the Santa Cruz wharf. The wharf is nearly 100 years old and is the longest (1/2 mi) on the west coast. There are great opportunities for extending our Exploration Center interpretive mission out on the wharf (across the street) with citizen science, signage, mobile exhibits, and activities, as well as partner research/monitoring projects. We will continue to work with the designers to incorporate green features and ocean messaging and science opportunities.

### RESEARCH AND MONITORING

#### **San Jose State University researcher initiates genetic work on invasive species**

On August 22nd, Sanctuary Integrated Monitoring Network (SIMoN) science diver Chad King and a reciprocity science diver from UCLA collected samples of invasive species for genetic analysis by Dr. Josh Mackie at SJSU. Mackie has NSF funding to use genetic analysis to determine the current spatial extent of invasive bryozoan *Watersipora* on the west coast of the US and to disentangle the species complex. He is also interested in the invasive tunicate *Diplosoma listerianum*, which rapidly overgrows native and invasive species alike in Monterey Harbor. One of his lab technicians was on site during the dive to preserve the fresh samples, and then transport them to the Mackie lab for genetic analyses.

### **New MBNMS Technical Report: Cultural History of Davidson Seamount**

Throughout history Davidson Seamount has played a role in mapping, research, and fishing. The role of the seamount in the region's rich maritime past is characterized in the new MBNMS Technical Report, "Cultural History of Davidson Seamount: A Characterization of Mapping, Research, and Fishing" (available at [www.montereybay.noaa.gov/research/techreports/trburton2013.html](http://www.montereybay.noaa.gov/research/techreports/trburton2013.html)). The history of mapping and research at the Davidson Seamount is relatively simple; however, the collective activities have produced dramatic results. For information on the Davidson Seamount, see <http://montereybay.noaa.gov/research/dsmz/welcome.html>.

### **Sporadic Event: California Grunion spawn in Monterey**

California Grunion (*Leuresthes tenuis*) was observed spawning on Del Monte Beach, Monterey, California during the summer of 2013. Sanctuary staff and local experts surveyed Del Monte Beach during the six possible spawning events from June through August, and observed spawning grunion throughout the summer. Runs were light (less than 100 fish), yet predictable. Grunion are more commonly found in southern California and northern Baja California, but occasionally are observed in Monterey and as far north as Tomales Bay. California Grunion spawn on sandy beaches during spring and summer months, on the first four nights of the full and new moons (centered around high tide). Grunion are small, slender fish with greenish backs, silver-blue stripe on sides, and silver bellies. They can reach a maximum total length of 8 inches. Additional information on this sporadic event can be found on the MBNMS SIMoN website at <http://sanctuarysimon.org/news/index.php/2013/08/california-grunion-spawn-in-monterey-summer-2013/>.

### **SIMoN staff participate in third and final workshop to develop ocean climate indicators**

Gulf of the Farallones National Marine Sanctuary staff, led by Dr. Benét Duncan, has developed a set of linked physical and biological climate change indicators for the north-central California coast and ocean region to track and address the effects of climate variability and change on the region. SIMoN staff are participating in the Indicators Working Group, which is headed by Dr. Jaime Jahnce (PRBO Conservation Science; SAC member), facilitated by Dr. Benét Duncan, and co-organized by Kelley Higgason (GFNMS) of the Ocean Climate Center. On Wednesday, August 28th, SIMoN staff attended the final of three workshops at the California Academy of Sciences. Participants reviewed the 90-page document and finalized the list of recommendations for the GFNMS SAC.

### **Subtidal Characterization of the Big Sur Coast to Continue This Week**

Research divers from MBNMS, California Academy of Sciences, and UC Santa Cruz will be diving multiple sites along the Big Sur coast from September 3-5. The R/V *Fulmar* will serve as the platform for this three-day trip, where divers will qualitatively characterize the invertebrates, fishes, algae, and habitat of each site from the edge of the kelp forest (approximately 20 meters) to the surf zone. High-definition video and photos will be captured throughout each dive to provide baseline video characterization, and potential b-roll for video production. To date, more than 90 sites have been surveyed over 10 years; leaving few large gaps of uncharacterized area along the entire Big Sur Coast. This subtidal work is unprecedented in its temporal and geographic distribution. This project builds upon marine resources surveys initially conducted from 2003 to 2005 as part of the Coast Highway Management Plan (CHMP) for Highway 1 in Big Sur.

### **NOAA Fisheries Scientist Joins the MBNMS RAP**

Dr. Susan Sogard of the Southwest Fisheries Science Center, NOAA Fisheries Service in Santa Cruz has joined the MBNMS Research Activity Panel (RAP) as the primary representative for the Shelf and Slope Ecology discipline. Sogard is the Early Life History Team Leader and Ecology Investigation Chief within the Fisheries Ecology Division at the Southwest Fisheries Science Center in Santa Cruz. The MBNMS RAP is a working group of the MBNMS Advisory Council. The RAP is composed of 25 representatives from regional research institutions and organizations.

### **MBNMS Research Activity Panel Meets at Monterey Bay Aquarium**

On September 13th, Monterey Bay National Marine Sanctuary's (MBNMS) Research Activity Panel (RAP) met at Monterey Bay Aquarium (MBA). Agenda items included: MBA Conservation and Science Update (Margaret Spring/MBA), MBNMS-related Desalination Activities (Bridget Hoover/MBNMS), Discussion of System-wide Monitoring (James Lindholm/CSUMB), Essential Fish Habitat Proposal (Karen Grimmer/MBNMS), Summary of August SAC Meeting at Half Moon Bay (James Lindholm/CSUMB), and RAP Membership Update (Andrew DeVogelaere/MBNMS).

### **SIMoN staff successfully survey six kelp forest sites in Big Sur using the R/V FULMAR**

From September 3rd to 5th, SIMoN staff completed surveys at six sites as part of the Big Sur Nearshore Characterization (BSNC) project using the R/V FULMAR, all in spite of rough seas and very high winds. The 3-day trip allowed divers to survey areas near Lafler Creek, Salmon Creek, Gorda, Tide Rock, Mill Creek, and Yankee Cove, all of which are within the 70-mile stretch of coastline actively managed for landslides by CalTrans. This project builds upon marine resources surveys initially conducted from 2003 to 2005 as part of the Coast Highway Management Plan (CHMP) for Highway 1 in Big Sur. Science divers from UC Santa Cruz assisted with data collection, and two science divers from the California Academy of Sciences collected video footage and assessed the feasibility of using the FULMAR as a platform to collect organisms for the CAS exhibits.

### **Dozens of Humpback Whales observed off the Big Sur coast**

On September 3rd, SIMoN staff observed at least 50 individual Humpback Whales off the coast of Big Sur Nearshore while aboard the R/V FULMAR. Local whale watching boats had noted dense clusters around Point Sur, and staff encountered the group just north of the point while transiting south. There were also mixed groups of Risso's Dolphins and Pacific White-sided Dolphins. In many cases the whales were feeding in dense fields of krill that were noted on sonar to depths of 15 m. No one had seen such a dense aggregation of whales before.



Young Humpback Whale breaching just offshore of the anchorage at Lucia used by the R/V FULMAR, September 3, 2013. Credit: Dr. Steve Lonhart, NOAA MBNMS

### **Navigation Software Training and Future Collaborations**

Staff from Cordell Bank NMS, the West Coast Regional office and Monterey Bay NMS conducted a training for Hypack navigation software which will be used in several upcoming ROV research cruises in Central California. Having additional staff members trained allows for efficient navigation while on the vessel and allows for rotating staff members without impacting the integrity of the project.

### **USS *Macon* expedition video footage to appear in Discovery Channel Program**

Windfall Films (London, UK) requested video footage of USS *Macon* expedition in Monterey Bay National Marine Sanctuary (MBNMS) for Discovery Channel's 10-part series, "Rise of the Machines." The USS *Macon*, a 785-foot dirigible, was lost offshore of Point Sur on February 12, 1935. In 2005 and 2006, MBNMS partnered with Monterey Bay Aquarium Research Institute and others to map and characterize the wreck of the USS *Macon* and her four sparrowhawk planes off Point Sur. The remains of the *Macon* assemblage provide an opportunity to study the relatively undisturbed archaeological remnants of a unique period of aviation history. Information on the expedition can be found at: <http://montereybay.noaa.gov/maritime/macon/welcome.html>

### **Enhancing Fishermen's Navigation Software with Regulation Boundaries**

MBNMS staff worked with technicians at P-Sea Software Co, a navigation software company based in Morro Bay, to develop digital files to delineate EFH Conservation areas and the 700 fathom trawl footprint of the West Coast compatible with the navigation software that trawl fishermen use. During the development of the MBNMS collaborative EFH proposal in the Spring and Summer of 2013, fishermen noted that it would be helpful if the software they used for navigation contained regulation boundaries.

### **Checklist of Fishes of Monterey Bay National Marine Sanctuary Now Available**

The question is often asked, "How many fish species occur in Monterey Bay National Marine Sanctuary (MBNMS)?" One cannot answer that question without first answering the question "What fish species are known to occur in MBNMS?" The technical report, "Checklist of Fishes Known to Occur in Monterey Bay National Marine Sanctuary" was compiled to serve as a defensible list. Numerous sources were consulted including: regional guidebooks, local experts, pertinent literature, recent field surveys, and most importantly catalogued ichthyology collections. The checklist is a simple one: a taxonomic checklist of fishes (any life history stage) known to occur in MBNMS. The list includes 525 fish species. The report is available online in several places: MBNMS Site Characterization, MBNMS Fishes section on SIMoN website, MBNMS Technical Reports, and can be downloaded at <http://montereybay.noaa.gov/research/techreports/trburton2013b.html>.

### **SIMoN Staff Train Oregon Science Divers to Monitor MPAs**

From September 17-23, Sanctuary Integrated Monitoring Network (SIMoN) staff trained 18 new science divers as part of a collaborative effort with the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)-University of California at Santa Cruz (UCSC) and PISCO at Oregon State University. Both the Hatfield Marine Science Center and the Oregon Coast Aquarium (OCAq) in Newport, OR served as training centers and our base of operations. Staff from the Oregon Department of Fish and Wildlife requested training for research divers from OSU and the OCAq to build an internal capacity to conduct diver surveys in MPAs and adjacent comparison sites. As part of the training program, science divers learned to identify hundreds of invertebrates, fishes, algae, and practiced subtidal survey methods developed by PISCO. Divers spent two days in the classroom and then four days either diving near Depoe Bay or in the OCAq exhibit tanks. ODFW is charged with monitoring the 5 new Oregon MPAs and will use the same diver survey methods used by PISCO in CA MPAs, thereby standardizing methods and data sets, and allowing cross-state comparisons.

## RESOURCE PROTECTION

### **Aquaculture Coordination with the Regional Water Quality Control Board**

MBNMS staff have been in discussion with the RWQCB over the past several weeks pursuant to a NPDES Permit they are poised to renew. Consultation is occurring under the Memorandum of Agreement for Water Quality. Several recommendations have been made to the RWQCB to improve the integrity of the permit and their pending approval. Given those additions, MBNMS is poised to issue an Authorization the first week of October.

### **San Simeon Wastewater Treatment Plant Evaluation**

MBNMS staff have been in discussion with the Regional Water Quality Control Board over the past several weeks pursuant to a NPDES Permit they are poised to renew. Consultation is occurring under the Memorandum of Agreement for Water Quality. This wastewater treatment facility has been operating in full compliance for several years, and in 2012 added a tertiary treatment unit that is up and running & supplying water for agriculture use in the area. MBNMS is poised to issue an Authorization the first week of October.

### **MBNMS Co-hosts Farm Food Safety & Conservation Network Co-management Forum (FFSCN)**

A day long FFSCN Forum was held in Watsonville, CA on August 21, organized by a committee that included MBNMS staff, was attended by over 80 people from the agricultural industry, regulatory and conservation agencies, food safety auditors, and NGOs interested in the topic of co-management of food safety and conservation. Controlling microbiological contamination hazards in food products can be at odds with efforts to conserve of natural resources, so finding a means to accomplish both in an integrated way requires creative problem solving and collaboration between multiple parties and perspectives. The keynote speaker, Craig McNamara, President of the California Board of Food and Agriculture, kicked off the day. The first panel included scientific researchers studying nutrient management, pathogens and pesticides on California's Central Coast. The second panel addressed policy updates related to co-management impacts and included panelists representing the Central Coast Regional Water Quality Control Board, CDFG, growers, the Leafy Greens Handlers Marketing Agreement, and the Resource Conservation Districts. In the afternoon, participants toured the Triple M ranch managed by Alba (<http://www.albafarmers.org>). Conservation practice demonstrations included newly established ponds as habitat for protected species, a wetland, hedgerow plantings, and habitat for beneficial insects and raptors for pest control. Groups discussed potential food safety concerns associated with these conservation practices and how to best manage the site for pathogen free food.

### **Unlocking database mysteries**

Monterey Bay National Marine Sanctuary staff met with staff from the California State University Monterey Bay's Institute for Applied Marine Ecology (IfAME) laboratory to receive an in-depth tutorial of their Access database containing thousands of fish and invertebrate observations based on ROV and towed camera sled video from 2007 to 2012 within the Sanctuary. This database was queried for selected groundfish and invertebrates and the results were then spatially queried in GIS and applied to the MBNMS Essential Fish Habitat proposal submitted to NMFS on July 31, 2012. Through that collaboration, we recognized that queries from this expansive database can have other resource protection applications.

### **Pacific Grove seeks ordinance based on harbor seal policy**

On Wednesday August 21, at the City Council meeting for the City of Pacific Grove, public works staff proposed to the city council that a former harbor seal policy adopted in 2007 be converted into an ordinance. Events in the spring of 2013 pointed out the need for the City of Pacific Grove to have more enforcement strength in regards to the pupping harbor seals along a stretch of PG coastline. The new ordinance will provide the city with clear guidelines for temporary fencing and signage to be installed for pupping harbor seals.

Included in these efforts will be a Coastal Development Permit from the California Coastal Commission to allow for the temporary fencing and signage. MBNMS BayNet volunteers were instrumental in the efforts to both protect harbor seal pups and in encouraging the City to take a proactive position on the topic.

### **Regional Storm Water Management Program 2012/13 monitoring report finalized**

Water quality staff for the Monterey Bay National Marine Sanctuary, completed a final report for the 2012-2013 storm water monitoring program for the Monterey Regional Storm Water Management Program (MRSWMP). Monitoring for the MRSWMP program includes First Flush and an additional wet weather monitoring, the Second Flush. Dry Weather monitoring efforts include the Dry Run before the first major rainstorm of the winter season, and the Summer Run after the winter rains have subsided. Samples are collected from storm drain outfalls for all monitoring events and lab analyzed for bacteria (*E. coli*, enterococcus), nutrients (nitrate, phosphate and urea), metals (copper, zinc, lead) and total suspended solids.

### **Deep Sea Characterization Database User Guide Developed**

The Institute for Applied Marine Ecology (IfAME) began a partnership with the MBNMS in 2007 to characterize the continental shelf

and slope of the Sanctuary using video and still cameras mounted to a remotely operated vehicle (ROV) and camera sled. IfAME staff built an Access database containing habitat and fauna (macro-invertebrates and fishes) observations from approximately 195 hours of video and linked it with navigation data. Queries from this database informed the MBNMS's collaborative EFH proposal. In order to facilitate future analyses based on this database, MBNMS staff developed a user guide detailing the database's development procedures and contents.

### **Monterey Bay National Marine Sanctuary Collaborative EFH proposal reviewed by EFH Review Committee**

The Essential Fish Habitat Review Committee convened in Portland, OR to review the 8 EFH proposals that were submitted in late July. The group represents members from NMFS and ONMS staff, scientists, conservation NGOs, tribal leaders and fishing stakeholders, and the purpose of the two day meeting was to review and discuss the proposals and develop recommendations that will go to the PFMC members for their November meeting. The group beta tested a new decision support tool - the Bayesian Analysis for Spatial Siting (BASS) decision support tool, and had some technical challenges with the tool. In addition, each proponent (including MBNMS) provided presentations to the group on their specific proposal and answered questions from the committee. The MBNMS collaborative EFH proposal was well received and overall scored very highly among the 8 proposals.

### **Volunteers turn out for First Flush 2013 Training**

New and returning First Flush volunteers attended a training for the Dry Run and First Flush water monitoring programs on the evening of September 4<sup>th</sup> in Santa Cruz and September 5<sup>th</sup>, in Monterey. Volunteers learned about the sanctuary, adjacent watersheds and the First Flush monitoring program. First Flush volunteers will monitor 25 storm drains that flow into the sanctuary during the first major rainstorm of the winter season from Santa Cruz to Carmel Bay. The Dry Run will take place on Saturday, September 7<sup>th</sup>. Volunteers will visit their sites and collect samples where there is running water for the same parameters as the First Flush. This is the 14th year of the program and it helps to promote sanctuary conservation messages while providing valuable information about the types and concentrations of urban runoff pollution entering the sanctuary.

### **Santa Rita Creek Restoration Project Gets Started**

On August 24th, sanctuary staff and partners at the Central Coast Wetlands Group held a public outreach event for residents living around the Ferrasci Park Baseball Field in Salinas, CA. They got a chance to preview design plans for a restoration project that will be installed adjacent to the park in the coming year. Aspects of the project include regrading to increase capacity for higher flows in the Santa Rita Creek, planting of natives along the banks of the creek, and implementation of on-farm best management practices (BMPs) to decrease nutrient, bacteria and sediment that flow from farms into the Santa Rita Creek. Volunteers were recruited to help with planting of natives and water monitoring in the creek. This project is funded by a grant for Integrated Regional Water Management Planning. By conducting outreach, implementing BMPs and doing stream restoration, we hope to reduce pollution from all potential sources in the watershed and determine at what scale we can see positive results to water quality.

### **Pushing the Boundaries of Recycling and Waste Diversion**

Along with the president of the Monterey Chamber of Commerce and staff representatives of State Senator Bill Monning's office, Monterey Bay Sanctuary staff participated in a tour providing a first-hand look at the seamlessly integrated material processing operations offered by GreenWaste and Zanker Road Resource Management in Watsonville, Gilroy and San Jose, CA. Together, the companies collect and process recyclables, yard trimmings, compostables, food waste, garbage, mixed construction waste and construction and demolition debris, achieving some of the highest recycling rates in the industry. The innovative processing at the GreenWaste Material Recovery Facility divert 72-75% of the garbage that was headed to the landfill. Staff also toured the construction site of the first commercial scale dry fermentation anaerobic digestion facility in the United States. When the first phase of the facility becomes operational in January 2014, it will process up to 90,000 tons per year of organic waste, generating approximately 1.6KW of clean green renewable power and will be the largest facility of its kind in the world. By minimizing their carbon footprint and focusing on sustainable practices, these companies make excellent neighbors to National Marine Sanctuaries.

### **Fisheries stakeholder group meets to discuss EFH follow up for PFMC meetings**

MBNMS Essential Fish Habitat stakeholder group met for 1/2 day on Sept 18 to follow up on strategies included in the collaborative EFH proposal such as implementing a pilot project for 3 small voluntary management areas and moving towards improved enforcement tools such as electronic monitoring. The participants include Steve Scheiblauer w/City of Monterey, Geoff Shester w/Oceana, David Crabbe w/PFMC, Joe Pennisi, trawler, Kathy Fosmark, SAC fishing primary, Melissa Stevens w/TNC, Seth Atkinson w/NRDC. This fisheries forum evolved from the EFH proposal development meetings, and the group has committed to ongoing meetings to continue coordination on EFH and discussion for other fisheries related projects and proposals within the sanctuary.

### **US Congressman Farr and CA State Assemblymember Stone offer letters of support for MBNMS collaborative EFH proposal**

Monterey Bay National Marine Sanctuary staff is coordinating with the above offices on letters of support for the Essential Fish Habitat (EFH) proposal submitted to PFMC in July. Reviews from the EFH review committee were positive and supportive, and the group has

recommended the PFMC move forward with a Fisheries Management Plan (FMP) amendment at the November meeting. The additional letters of support will hopefully reiterate the importance of approving the FMP amendment and keeping the proposed areas intact as a comprehensive package.

#### **Santa Rita Creek Project staff meet with Ferrasci Park Board of Directors**

On September 17th, Monterey Bay National Marine Sanctuary Water Quality Protection Program staff met with the new Ferrasci Ballpark Board of Directors to go over plans for the Santa Rita Creek restoration project. Board members were excited about the plans and future improvements to the creek area adjacent to their ballpark. Plans for earth moving and native plants were discussed as well as long-term maintenance of the restoration site. The Santa Rita Creek restoration project is funded through a Dept. of Water Resources grant to the Monterey Bay Sanctuary Foundation and will provide outreach and water quality improvement projects to the upstream agricultural community, provide restoration on the creek, and involve the community in planting and water quality monitoring. This is a holistic approach to improving water quality in a severely impacted urban stream that eventually flows to MBNMS.

#### **MBNMS Fishing Working Group Discussion**

On September 23, the SAC commercial and recreational fishing members, as well as Alliance of Communities for Sustainable Fisheries and additional fishing community members attended a round table discussion on how to stand up a Fishing Working Group of the MBNMS SAC. Different models were explored including 1. using the Alliance as a forum as needed as issues arise, 2. forming a group that includes Alliance members plus other fishermen as needed to meet for specific purposes. Some ideas on future issues to tackle included: developing collaborative research grants and projects, ocean acidification issues, expanding ed and outreach efforts, and voluntary management areas, a concept arising from the EFH proposal. Some members thought the purpose should be to uplift the fishing industry and more fully embrace sustainable fisheries issues, and others expressed interest is having a group that could provide presentations and policy input to the rest of the SAC in a more proactive versus reactive approach.

#### **International Leatherback Sea Turtle Summit Planning Progresses**

On October 14-16, the first ever bi-national leatherback sea turtle summit of its kind held in Monterey and represented by government and scientific leaders from ONMS, NMFS, California, and Tambrauw-Indonesia. The goals were to establish bi-national cooperation between Tambrauw-Indonesia and California to conserve the endangered Pacific leatherback sea turtle; raise awareness about Pacific-wide efforts toward leatherback recovery; and rally state and federal agencies in California to coordinate with each other. Nesting leatherbacks have declined by 85% over the last 25 years at last two main nesting beaches in Indonesia and threats include: incidental capture in fishing gear, harvesting of eggs on nesting beaches, plastic pollution, and climate change. Day 1 focused on talks about the current status of the leatherback; Day 2 focused on filling gaps in current conservation efforts, a signing ceremony with a declaration agreement to be signed by the State of California, Monterey Bay National Marine Sanctuary, National Marine Fisheries Service, and Tambrauw-Indonesia followed by a press conference; Day 3 was an on-the-water tour to seek Pacific leatherback foraging areas in Monterey Bay.

## **ENFORCEMENT**

#### **Law Enforcement Technical Advisory Committee (LETAC) Builds Partnerships**

On September 5, Monterey Bay National Marine Sanctuary led the quarterly meeting of the LETAC. The group discussed various marine enforcement issues of common interest. Established by MBNMS in February 2009, the LETAC continues to enhance collaboration between law enforcement agencies operating within the sanctuary, building synergy and more effective enforcement response to environmental threats in the sanctuary.

#### **Constituent Inquiry from Congressman Sam Farr**

Monterey Bay National Marine Sanctuary is investigating an alleged aerial spraying incident that may have occurred over MBNMS waters in February 2013. The incident was reported to Congressman Farr's office and subsequently referred to MBNMS by congressional district staff as a routine follow-up. MBNMS is contacting agencies known to periodically operate low-flying, multi-engine aircraft over the sanctuary to determine if they may have conducted flight operations on the day the spraying incident allegedly occurred.

#### **Aircraft Wreckage Discovered in Southern Big Sur Area**

On September 4, Monterey Bay National Marine Sanctuary divers discovered aircraft wreckage while conducting underwater research surveys at a depth of 40 feet in the Soda Springs area of Big Sur. On September 9, 2012, a Cessna 185 seaplane made an emergency water landing in the sea about a mile from the wreckage found this week by MBNMS divers. The Cessna sank after its crew were rescued, but a 2012 search failed to locate the wreckage. MBNMS and NOAA OLE will conduct further investigation to determine if the recent discovery is the wreckage from last year's aircraft casualty.

## EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

### **Santa Cruz Boys & Girls Club Participate in Fisheries Education Program**

On August 9th the Santa Cruz Boys & Girls Club participated in a Voices of the Bay program at the Sanctuary Exploration Center in Santa Cruz. The kids age 9-12, were part of a week-long science-based summer camp which ended the week with a lesson on the sanctuary and Monterey Bay fisheries. This program was a follow up to an initial pilot of the Voices of the Bay program through the Sanctuary Exploration Center. The group was led on a tour of the center where they completed a scavenger hunt for fisheries information, then participated the Balance in the Bay fisheries education activity in the Exploration Center classroom. In Balance in the Bay, students simulate a squid fishery where they learn the challenges involved in extracting and managing a marine resource. <http://sanctuaries.noaa.gov/education/voicesofthebay/>.

### **Volunteers get out on the bay in appreciation of their commitment to MBNMS**

On August 10th, a volunteer appreciation day allowed fifty volunteers with the Monterey Bay National Marine Sanctuary to get out on the sanctuary to see humpback whales and seabirds on two cruises aboard the R/V Fulmar. Volunteers were ecstatic about seeing the whales and birds and got an opportunity to mix and mingle as well. Significance: providing opportunities for volunteers to get on the water in the sanctuary will enrich the volunteers' experience and their interpretation as well, but also provides a way for volunteers to meet each other and hopefully provide connections between the volunteer programs.

### **Sanctuary Exploration Center Volunteers Donate Over 100,000 Hours**

From June 2012 through August 2013 Sanctuary Exploration Center Volunteers donated over 100,000 combined hours. The Sanctuary Exploration Center Volunteers are integral team members responsible for interpreting exhibits to the public, greeting visitors, operating the gift shop, and assisting with outreach events and field trips. Volunteers commit to at least 8 hours a month (96 a year); however, over 40 volunteers have contributed over 100 hours and 20 have contributed over 200 hours in just over a year!

### **Staff attends Eco-Charette at Biosphere 2 in Oracle, Arizona**

Monterey Bay National Marine Sanctuary Exploration Center staff attended a meeting at Biosphere 2 in Oracle, Arizona. A group of scientists, educators, exhibit developers and Biosphere staff came together to discuss future facility exhibits and the use of the 700,000 gallon ocean tank which is adjacent to live mangrove, rainforest and desert habitats. The plan is to transform the ocean area into a "Desert Sea" a living mesocosm of the Gulf of California, highlighting the rich ecology, diverse human cultures, and conservation challenges.

### **Sanctuary Participates in Coastal Cleanup Day *First Friday* Event**

Monterey Bay National Marine Sanctuary staff and volunteers participated in the California Coastal Cleanup Day "First Friday" event at the Santa Cruz Museum of Art and History. The event featured ocean conservation focused local artists and educational opportunities where MBNMS volunteers hosted a watershed presentation and discussed with the public ways they can positively (and negatively) affect the sanctuary from land. The event was aimed at gaining awareness for the California Coastal Cleanup Day on Sept 21<sup>st</sup>, which sanctuary volunteers will lead at Cowells beach in Santa Cruz.

### **Monterey Bay Sanctuary's Team OCEAN Volunteers assist with Sea Otter Tagging**

Throughout the week of September 16<sup>th</sup>, Team OCEAN volunteers assisted a sea otter capture and tagging project conducted in Elkhorn Slough by the Monterey Bay Aquarium, University of California at Santa Cruz, California Department of Fish and Wildlife, Elkhorn Slough National Estuarine Research Reserve, and the US Geological Survey. Team OCEAN volunteers alerted kayakers and boaters in the slough to the presence of the capture and tagging project and encouraged kayakers to steer clear of the capture area. In all, 20 otters were captured and tagged.

### **Sanctuary Exploration Center Participates in 29th Annual Coastal Cleanup Day.**

Sanctuary Exploration Center Volunteers "captained" the Cowells and Main Beach cleanups as part of Annual Coastal Cleanup Day on September 21st 2013. Sanctuary Exploration Center volunteers assisted over 30 additional volunteers in collecting over 50 lbs of trash and 17 lbs of recycling at the two beaches. This effort was a part of the larger Annual Coastal Cleanup Day where volunteers worldwide survey trash collected on beaches. In the sanctuary, over 3,000 volunteers collected 14,517 lbs of trash and 2360 lbs of recycling from beaches and waterways.

### **Coastal Discovery Center Partners in Interpretive and Educational Program**

MBNMS and CA State Parks partnered this summer to create programs designed to fulfill interpretive and educational missions of both agencies. Led by staff from CA State Parks and volunteers from the Coastal Discovery Center, over 300 visitors from nearby campgrounds attended summer programs. These included Beach Exploration, San Simeon History, Taking Care of Sick and Injured Marine Mammals and Exploring the Wonderful World of Plankton.

**Coastal Discovery Center Involved in Wine Travel Program**

MBNMS' Coastal Discovery Center partners with local businesses and conservation organizations in San Luis Obispo County to create the Wine Coast Country Stewardship Travel program. This innovative program encourages visitors to learn about the area's natural and cultural resources through participation in hands-on educational activities.

## NEWS COVERAGE

### **Monterey Bay Trawling Deal Hailed as a Breakthrough**

Monterey Herald – August 17, 2013

[http://www.montereyherald.com/ci\\_23884944/monterey-bay-trawling-deal-hailed-breakthrough](http://www.montereyherald.com/ci_23884944/monterey-bay-trawling-deal-hailed-breakthrough)

### **Hyperbaric Chamber Reopens in Pacific Grove**

Monterey Herald – September 2, 2013

[http://www.montereyherald.com/news/ci\\_24001091/hyperbaric-chamber-reopens-pacific-grove?source=rss](http://www.montereyherald.com/news/ci_24001091/hyperbaric-chamber-reopens-pacific-grove?source=rss)

### **New iPhone/iPad App Features California's National Marine Sanctuaries**

Noozhawk – September 11, 2013

[http://www.noozhawk.com/article/new\\_iphoneipad\\_app\\_features\\_california\\_national\\_marine\\_sanctuaries\\_20130911](http://www.noozhawk.com/article/new_iphoneipad_app_features_california_national_marine_sanctuaries_20130911)

### **A whale of a time: Anchovies bring record numbers of humpbacks**

Santa Cruz Sentinel – September 13, 2013

[http://www.santacruzsentinel.com/santacruz/ci\\_24091445/whale-time-anchovies-bring-record-numbers-humpbacks](http://www.santacruzsentinel.com/santacruz/ci_24091445/whale-time-anchovies-bring-record-numbers-humpbacks)

### **Sanctuary to Public: Give Humpbacks Some Space**

Monterey County Weekly – September 19, 2013

[http://www.montereycountyweekly.com/blogs/animal\\_blog/article\\_bed9cb62-218d-11e3-a595-0019bb30f31a.html](http://www.montereycountyweekly.com/blogs/animal_blog/article_bed9cb62-218d-11e3-a595-0019bb30f31a.html)

## **WEB SITE (<http://montereybay.noaa.gov/>)**

### **Recent Updates**

Monterey Bay National Marine Sanctuary is pleased to announce the release of our new website, designed with a fresh new look and easy navigation. The homepage features upcoming events & news, and quick links to get you where you want to go with one click. The new website contains the latest information about our programs as well as new content, like “Things to Do” featuring fun ways to experience your sanctuary, from tide pooling and fishing to whale watching. We hope you enjoy browsing our new site!

### **Follow MBNMS on Facebook and Twitter!**

*Please take a few moments to peruse the site. Your feedback is greatly appreciated.  
Comments and suggestions can be sent to [andrew.white@noaa.gov](mailto:andrew.white@noaa.gov).*

---

---

## **FUN, OCEAN RELATED WEB SITES**

### **Seasons in the Sea**

<http://www.seasonsintthesea.com>

### **Thank You Ocean**

<http://www.thankyouocean.org/>

### **NOAA Online Media Library**

<http://sanctuaries.noaa.gov/photos>

### **SIMON**

<http://www.sanctuariesimon.org>

### **Oceans Live**

<http://oceanslive.gso.uri.edu/>

### **Office of National Marine Sanctuaries**

<http://www.sanctuaries.nos.noaa.gov/>

### **NOAA Ocean Explorer**

<http://oceanexplorer.noaa.gov/>

### **Encyclopedia of the Sanctuaries**

<http://www.ocean.com/Library/Encyclopedia/>

### **National Data Buoy Center**

<http://www.ndbc.noaa.gov/rmd.shtml>

### **National Ocean Service**

<http://www.nos.noaa.gov/>

### **National Oceanic & Atmospheric Administration**

<http://www.noaa.gov/>

### MBNMS Staff

**Paul Michel** – Superintendent  
**Dawn Hayes** – Deputy Superintendent

#### Research

**Andrew DeVogelaere** – Research Coordinator  
**Erica Burton** – Research Specialist  
**Jennifer Brown** – SIMoN Ecosystem Scientist  
**Steve Lonhart** – SIMoN Senior Scientist  
**Chad King** – SIMoN Data Analyst

#### Education

**Liz Love** – Acting Education Coordinator  
**Lisa Uttal** – Interim Exploration Center Director  
**Carolyn Skinder** – Southern Region Program Coordinator  
**Chelsea Prindle** – Education Specialist  
**Craig Jutson** – Exploration Center Operations Specialist  
**Kaitlin Graiff** – Exploration Center Gift and Bookstore Manager  
**Brittany Cooper** – Coastal Discovery Center Docent Coordinator

#### Resource Protection

**Karen Grimmer** – Resource Protection Coordinator  
**Scott Kathey** – Regulatory/Emergency Response Coordinator  
**Deirdre Whalen** – Government and Community Relations Coordinator  
**Sophie De Beukelaer** – GIS Analyst  
**Pamela Kron-Davis** – Agriculture Water Quality Coordinator  
**Bridget Hoover** – Water Quality Protection Program Director  
**Lisa Emanuelson** – Citizen Watershed Monitoring Network Coordinator

#### Program Operations

**Raymond Chisolm** – Program Specialist  
**Sara Hutto** – Advisory Council Coordinator  
**Andrew White** – Network Manager and Webmaster



### **Learn More About Your Sanctuary**

The Sanctuary Office Report is produced bi-monthly by the Monterey Bay National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.montereybay.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:

<http://www.montereybay.noaa.gov/intro/advisory.html>

Check out YourSanctuaryTV on this link -

<https://www.youtube.com/playlist?list=PL22D067D179395D12>

### **The Office of National Marine Sanctuaries**

The Monterey Bay National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

### **Get involved and stay informed!**

To learn how to get involved in the Sanctuary visit:

<http://montereybay.noaa.gov/getinvolved/welcome.html>

Sign up for the MBNMS listserv to receive email notices about upcoming Sanctuary events, and public meetings of the Sanctuary Advisory Council and Working Groups:

<http://montereybay.noaa.gov/intro/elists.html#educate>

### **- Contact Information -**

### **Monterey Bay National Marine Sanctuary**

99 Pacific Street, 455A  
Monterey, CA 93940  
Phone (831) 647-4201  
Fax (831) 647-4250